REMARKS

The Examiner has rejected claims 1, 2, 4, 10-17, 19-22, 25 and 27-31 under 35 U.S.C. 103(a) as being unpatentable over Yee et al (US 6,151,497) in view of Palermo (US 6,181,734). The Examiner states that regarding claims 1 and 25 Yee teaches a data transmission system comprising: a two-way communication link comprising at least one satellite (i.e., satellite communication 10); at least one user terminal having two-way communication with the two-way communication (i.e., subscriber unit 50, and comprising a memory to collect data of potential interest to the subscriber, col. 3, lines 33-36); a software which retrieves information requested by way of the user terminal and information related to the requested information; and at least one gateway (36) having access to data and having two-way communication with the two-way communication link (Fig. 1, lines 13-22).

The Examiner goes on to say that Yee does not specifically teach the terminal having a cache for selectively caching data broadcast by way of the satellite of the two-way communication link; a software which retrieves information requested by way of the user terminal and information related to the requested information.

However, the Examiner goes on to state, the preceding limitations are known in the art of communications. The Examiner submits that Palermo teaches a terminal having a high-speed memory such as RAM that is used for caching software (col. 5, line 27 to col. 6, line 11). Therefore, according to the Examiner, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the high-speed memory (i.e., cache) taught by Palermo within the system of Yee in order that the operator of the terminal can place waveforms in cache random access memory such that rapid switching between selected waveforms can occur and communication over different radio networks.

Applicants respectfully submit that in Yee et al there is taught a satellite based broadcast data communications service for a satellite communications system which is presented allowing a data information service provider (40) to send large blocks of data information to mobile subscriber units (50). A satellite

gateway (30) is coupled to a service provider (40) via a ground link (42) and to a satellite communications network (10) via a gateway link (36). A mobile subscriber unit (50) is coupled to the satellite communications network (10) via both a message link (56) and a high-speed high-bandwidth downlink (58). The mobile subscriber unit sends a data request for requested data information to service provider (40) via message link (56), satellite communications network (10), gateway link (36), gateway (30), and ground link (42). Service provider (40) responds by retrieving and sending the requested data information to the requesting subscriber unit (50) via ground link (42), gateway (30), gateway link (36), satellite communications network (10), and high-speed high-bandwidth downlink (58). Service provider (40) sends a set of standard data information to the satellite communications network (10) to be broadcast over the high-speed high-bandwidth downlinks (58). Each subscriber unit (50) receives the broadcast standard data information, preferably only those portions for which the subscriber unit (50) has access authorization. The satellite based broadcast data communications service provides for data requests, data delivery, data access control, delivery priority, and billing for use of the system.

Applicants respectfully submit that in Yee et al, as may clearly be seen in Fig. 1, gateway (30) has one-way communication with satellite (10), not a two-way communication link as required in the claims of the instant invention and in Fig. 2, again, there is confirmation that gateway receiver/transmitter (38) has one-way communication link (36) and not two-way communication as required in the claims of the instant invention. Applicants respectfully again direct the Examiner's attention to Fig. 1 of the instant application where it is clearly seen that gateway (16) has a two-way communication link with satellite (11) as opposed to the one-way communication link as set out in Fig. 1 and 2 of the Yee et al patent.

Applicants respectfully submit that in Palermo '734 a radio is disclosed in which different waveforms may be utilized. The radio includes a memory (801) in which software (802, 805, 806) for specific waveforms is stored. The radio further includes one or more processors (807, 809, 811) which extract waveform specific software to process information for transmission or reception. All processing of the information between reception or reproduction

of speech and transmission and reception of radio frequency signals, respectively, is performed in software. Applicants respectfully do not concur that Palermo teaches a terminal having a high-speed memory such as RAM that is used for caching software in the broad ranging discussion starting at col. 5, line 27 to col. 6, line 11 and therefore it would not have been obvious to one of ordinary skill in the art at the time of the invention to implement this high-speed memory taught by Palermo within the system of Yee in order that the operator of the terminal can place waveforms in cache random access memory such that rapid switching between selected waveforms can occur and communicate over different radio networks. Applicants are at a loss to understand how Palermo discloses, suggests or implies a cache with selectively caching data broadcast by way of the satellite of the two-way communication link and further comprising software which retrieves information requested by way of the user terminal and information related to the requested information among other distinctions. Applicants respectfully contend that the teachings related to high-speed memory such as RAM, although they may be used for caching software, relate to the capability of an operator, as stated by the Examiner, of the terminal which allows placement of waveforms in cache random access memory such that rapid switching between selected waveforms can occur and communicate over different radio networks which is clearly distinguishable from the claims of the instant invention. Applicants respectfully submit that, except for the mere mention of cache and software, Palermo is totally unrelated to the claims of the instant invention and cannot in any way be properly combined with Yee et al as suggested by the Examiner to render claims 1 and 25 obvious under 35 U.S.C. 103.

The Examiner states further that regarding claim 2 Yee in view of Palermo teaches all the limitations. The Examiner goes on to say that Yee further teaches the two-way communication link comprises a low bandwidth two-way communication link (i.e., send request to satellite communications system over a low bandwidth message link (56) (col. 3, lines 42-50). Applicants respectfully submit that at col. 3, lines 42-50 in Yee et al there is stated "Subscribers access data information which is not included in the standard broadcast by generating data requests addressed to the appropriate service provider. The subscriber generates the data request via a user interface of

subscriber unit 50. Subscriber unit 50 processes the request and send it to "satellite communications system 10 over a low bandwidth message link 56. Message link 56 is a separate low bandwidth bidirectional communications channel connection between satellite 20 and subscriber 50." Applicants respectfully submit although they do not concur that the two-way communication link described by the Examiner at the recited passage in Yee et al teaches the two-way communication link comprises a low bandwidth two-way communication link as required in claim 2 of the instant invention, claim 2 is patentably distinguishable thereover for the reasons recited above with regard to the conspicuous absence in Yee et al relating to the at least one gateway having access to data and having two-way communication with the two-way communication link.

The Examiner states regarding claim 4 Yee in view of Palermo teaches all the limitations. The Examiner further states that Yee further teaches the two-way communication link comprises a high bandwidth data broadcast link (i.e., the satellite transmits the requested data information to subscriber over high bandwidth link (58) (col. 3, lines 20-22 and col. 3, lines 42-59). Applicants respectfully submit that in Yee et al at col. 3, lines 20-22 there is stated "Satellite communications network 10 then transmits the requested data information to subscriber units 50 over high bandwidth downlinks 58" and at col. 3, lines 42-59 it is stated in Yee et al "Subscribers access data information which is not included in the standard broadcast by generating data requests addressed to the appropriate service provider. The subscriber generates the data request via a user interface of subscriber unit 50. Subscriber unit 50 processes the request and send it to satellite communications system 10 over a low bandwidth message link 56. Message link 56 is a separate low bandwidth bidirectional communications channel connection between satellite 20 and subscriber 50. Satellite communications system 10 routes the data request to gateway 30 over link 36, where it is routed to service provider 40 over ground link 42. Service provider 40 retrieves the requested data information and sends to gateway 30 over ground link 42, which routes it to satellite communications network 10 over gateway link 36. A satellite in satellite communication network 10 includes the requested information in the standard broadcast stream which is broadcast over high bandwidth downlinks 58."

Although Applicants do not agree that the high bandwidth data broadcast link as defined in the recited passages in Yee et al by the Examiner teach the low bandwidth request link and the high bandwidth data broadcast link as defined in claim 4 of the instant invention, claim 4 is nevertheless patentably distinguishable over Yee et al in view of Palermo for the deficiencies cited above with regard to Yee et al and further cited with regard to Palermo which are hereby respectfully incorporated by reference.

The Examiner goes on to say regarding claims 10 and 27 Yee in view of Palermo teaches all the limitations therein. The Examiner goes on to say that Yee further teaches the gateway comprises a cache, (in the specification page 10, line 11, cache is storage medium), (i.e., a high capacity storage or memory is in the gateway to collect information prior to routing it to the desired destination), and at col. 4, lines 19-33 there is stated "Gateway control processor 32 ..... Preferably, gateway control processor 32 includes a processor coupled to a memory and accompanying control hardware...." Applicants respectfully submit that although they do not understand the recitation in the specification page 10, line 11 of apparently Yee et al, presumably teaching a gateway comprising a cache, this and the other recitation at col. 4, lines 19-33, which apparently the Examiner is relying on to teach the same cache mechanism, is ineffective to render claims 10 and 27 obvious under 35 U.S.C. 103 since Yee et al suffers a conspicuous absence of two-way communication from the gateway as recited above and Palermo is completely unrelated and cannot be properly combined with Yee et al to render the instant claims obvious for the reasons recited above.

The Examiner states regarding claims 11 and 29 Yee teaches a data transmission system comprising: a two-way communication link comprising at least one satellite (i.e., satellite communication 10), at least one user terminal having two-way communication with the two-way communication (i.e., subscriber unit 50, and comprising a memory to collect data of potential interest to the subscriber, col. 3, lines 33-36); a software which retrieves information requested by way of the user terminal and information related to the requested information; and at least one gateway (36) having access to data and having two-way communication with the two-way communication link (Fig. 1, lines 13-22); generating requests for data at the at least one user terminal (col. 3, lines

8-15); transmitting the requests for data from the at least one user terminal by way of the two-way communication link to the at least one gateway (col. 3, lines 8-17); obtaining the requested data at the at least one gateway (col. 3, lines 8-17); and transmitting the requested data from the at least one gateway to the at least one user terminal by way of the two-way communication link (col. 3, lines 8-22 and col. 4, lines 5-25).

The Examiner goes on to say that Yee does not specifically teach the terminal having a cache for selectively caching data broadcast by way of the satellite of the two-way communication link; a software which retrieves information requested by way of the user terminal and information related to the requested information.

However, the Examiner reasons, the preceding limitations are known in the art of communications. The Examiner further contends that Palermo teaches a terminal having a high-speed memory such as RAM that is used for caching software (col. 5, line 27 to col. 6, line 11). Therefore, according to the Examiner, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the high speed memory (i.e., cache) taught by Palermo within the system of Yee in order that the operator of the terminal can place waveforms in cache random access memory such that rapid switching between selected waveforms can occur and communicate over different radio networks.

Applicants respectfully submit that the rejections as applied to claims 11 and 29 fail for the reasons recited above with regard to the obvious deficiency in Yee et al and further with regard to the inapplicability and nonanalogous subject matter of Palermo to properly combine the two in rejecting claims 11 and 29 under 35 U.S.C. 103. Applicants do not agree that the limitations as stated by the Examiner regarding the absence of the cache as described are either contemplated, suggested or taught in Palermo. Further, Applicants respectfully submit it would not have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Palermo relating to high-speed memory within the system of Yee et al for the reasons cited above.

The Examiner states regarding claims 12-16, Yee in view of Palermo teaches all the limitations. The Examiner goes on to say Yee further teaches transmitting the requests for data comprises transmitting the requests for data

by way of low bandwidth communication link, low bandwidth satellite communication link, low bandwidth terrestrial communication link, or low bandwidth wireless communication link (col. 2, lines 42-44, col. 3, lines 9-12, and 44-50).

Applicants respectfully submit that although they do not agree that the recited citations in Yee et al teach the low bandwidth satellite communication link of claims 12-16, this rejection nevertheless fails for the reasons cited above with regard to the deficiencies of Yee et al and the inapplicability and combinability of Palermo as described above.

The Examiner states with regard to claim 17 Yee in view of Palermo teaches all the limitations. The Examiner goes on to say that Yee further teaches transmitting the requests for data comprises transmitting the requests for data by way of high bandwidth data broadcast link (col. 2, lines 23-26, lines 44-55).

Applicants respectfully contend that although they do not agree that the high bandwidth data broadcast link contemplated in claim 17 of the instant invention is met by the recited recitation in Yee et al in view of Palermo, and further this rejection nevertheless fails for the obvious deficiencies of Yee et al and the inapplicability of Palermo as recited above.

The Examiner states with regard to claims 19 and 20 Yee in view of Palermo meets all the limitations. The Examiner goes on to say that Yee further teaches obtaining the requested data at the at least one gateway using a user's request history to obtain the requested information (i.e., the gateway is in communication with a billing function to generate data related to specific subscriber unit usage, which reads on the step of obtaining the requested data at the at least one gateway comprises using a user's profile to obtain the requested information, col. 3, line 65 to col. 4, line 58).

Applicants respectfully disagree that in the wide-ranging discussion from col. 3, line 65 to col. 4, line 58 in Yee et al that the billing function described therein employs a user profile relating to the user's request history to obtain the requested information. Applicants respectfully contend that nowhere does any such function or language appear in the recited passages. Applicants respectfully submit that this rejection in addition fails in view of the obvious deficiency in Yee et al and the inapplicability of Palermo as recited above.

The Examiner states regarding claim 21 that Yee in view of Palermo meets all the limitations. The Examiner further states that Yee teaches obtaining the requested data along with data related to the requested data at the at least one gateway (col. 4, lines 5-33), and transmitting the requested and related data from the at least one gateway to the at least one user terminal by way of the two-way communication link (col. 3, lines 9-22).

Applicants respectfully submit that at col. 4, lines 5-33 there is stated at line 9 "respond by sending the requested data information to the requesting subscriber" and in col. 3, at line 19 there is stated "then transmits the requested data information to subscriber units 50...." Applicants respectfully submit that nowhere in said recitations is there taught "obtaining the requested data along with data related to the requested data at the at least one gateway and transmitting same by way of a two-way communication link." Further, this rejection fails as do others for the obvious deficiencies of Yee et al and the inapplicability of Palermo as fully recited above.

The Examiner states regarding claim 22 that Yee in view of Palermo teaches all the limitations. The Examiner further submits that Yee teaches storing the requested and related information at the gateway (col. 4, lines 5-45).

Applicants respectfully disagree that in the wide-ranging discussion at col. 4, lines 5-45 there is taught, suggested or implied that the requested and related information is stored at the gateway. It is Applicants' position that only requested information is described in said passages and furthermore this rejection fails for the obvious omissions in Yee et al and the inapplicability of Palermo as fully recited above.

The Examiner states regarding claim 28 that Yee in view of Palermo teaches all the limitations. The Examiner further states that Yee teaches terrestrial communication link for transmitting the requested data to the at least one user terminal in the event that the satellite broadcast link becomes inoperative (i.e., gateway notifies subscriber if delays are to be expected from satellite, col. 4, line 64 to col. 5, line 24).

Applicant respectfully disagrees that anywhere in col. 4, line 64 to col. 5, line 24 Yee et al teaches a terrestrial communication link for transmitting the requested data to the at least one user terminal in the event the satellite broadcast link becomes inoperative but merely discloses, as the Examiner

admits in the parenthetical material of the rejection, that the gateway merely notifies the subscriber if delays are to be expected from the satellite and nothing more. Further, the rejection of claim 28 fails for the reasons recited repetitively above of the deficiencies in Yee et al and the inapplicability of Palermo as fully explained above.

The Examiner states regarding claims 30-31 that Yee in view of Palermo meets all the limitations of the claim. The Examiner goes on to say that Palermo further teaches the cache has a size on the order of 30 gigabytes or multi-gigabyte hard disk (i.e., inherently present in the high speed memory, cache memory, and hard disk memory, col. 5, lines 26-67).

Applicants respectfully disagree that Palermo at col. 5, lines 26-67 teaches the cache of the instant invention as having a size on the order of 30 gigabytes or multi-gigabyte hard disk which the Examiner states is inherently present in the high speed memory, cache memory and hard disk memory. Applicants respectfully contend that nowhere in said passages is there described a cache the size on the order of 30 gigabytes as required in claim 30 and a cache comprising a multi-gigabyte hard disk drive as required in claim 31. The teachings at col. 5, lines 26-67 are a wide-ranging discussion of an arrangement for use with processors which permits rapid switching of waveform functionality and, although mentions caches, is inapplicable to claims 30 and 31 and furthermore this rejection fails because of the obvious deficiencies of Yee et al and the inapplicability of Palermo as recited above.

Claims 3, 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yee et al in view of Palermo further in view of Noerpel et al (US 6,233,451).

The Examiner states regarding claims 3, 5 and 7 that Yee in view of Palermo discloses the system recited in claims 2 and 4 but fails to teach the two-way communication link comprises a Ku-band and Ka-band. However, the Examiner states, Ka-band and Ku-band are common in satellite communication. The Examiner further states that Noerpel teaches a terrestrial gateway communicates with the satellite over a feeder link frequency, which can be Ka-band, Ku-band or any band that can be applicable to mobile satellite (col. 3, lines 32-40). Therefore, according to the Examiner, it would have been obvious to one of ordinary skill in the art at the time of the invention to

implement the Ka-band or Ku-band appropriately in order to timely implement the satellite system based on already existing technology and government policy in practice.

The Examiner further states regarding claims 6 and 8 Yee in view of Palermo teaches the Ku-band and Ka-band provide a plurality of spot beams that covered selected coverage regions (col. 3, line 32 to col. 4, line 25).

Applicants respectfully submit that in Noerpel et al there is disclosed an access terminal for initiating spot beam selection in a satellite communication system in which the access terminal includes a receiver for measuring the received signal strength (RSS) of a multiplicity of radio frequency communications spot beam links. The access terminal is further provided with a microcontroller for comparing the received signal strengths from each of the multiplicity of spot beams to initiate information communication via a communication channel of the satellite communication system. In a described embodiment, the controller of the access terminal compares seven spot beam links to determine whether to initiate information communication with one of the seven spot beams received. Additionally, a memory coupled to the controller of the access terminal is used for storing spot beam identification information including the spot beam links assigned to the access terminal via the satellite communication system. The selection procedure employed by the system and method described facilitate a rapid selection of an appropriate spot beam identified from the multiplicity of radio frequency spot beam links received at a mobile access terminal.

Again, Applicants respectfully submit that Yee et al in view of Palermo do not imply, suggest or disclose a system reciting claims 2 and 4 and further fail to teach the two-way communication link comprises a Ku-band and Ka-band. Applicants respectfully disagree that Ka-band and Ku-band are common in satellite communication as employed in the novel system of the instant invention. Further, Applicants respectfully submit that Noerpel et al at col. 3, lines 32-40 there is disclosed "Each spot beam 20 is associated with a predetermined geographic region. The terrestrial gateway 16 communicates with the satellite 14 over a feeder link frequency. Additionally, the feeder link "may be C-band, Ku-band, Ka-band or any band that can be applicable to mobile satellite allocation.

"The satellite 14 includes transponders for translating between the mobile link spot beam 20 signals used by the access terminals 12 and the Ku-band feeder link 22 signals used by the gateway 16. "

Applicant respectfully disagrees that Noerpel et al teaches a terrestrial gateway communicating with the satellite over a feeder link frequency which can be Ka and Ku-band and so forth in the manner described in the novel system of the instant invention. Further, Applicants respectfully contend it would not have been obvious to one of ordinary skill in the art at the time of the invention to implement Ka-band and Ku-band appropriately in order to timely implement the satellite system based on already existing technology and government policies in practice as claimed in the novel system of the instant invention. Furthermore, Applicants respectfully again submit that this rejection of claims 3, 5 and 7, as well as the rejection directed to claims 6 and 8, fails because of the obvious deficiencies of Yee et al and the inapplicability of Palermo as previously fully recited above. Further, with regard to claims 6 and 8, although Applicants cannot discern from the wide-ranging discussion in Palermo at col. 3, line 32 to col. 4, line 25 that Ku-band and Ka-band provide a plurality of spot beams that cover selected coverage regions, Applicants respectfully contend for this reason and those cited above with regard to Yee et al and Palermo this rejection fails.

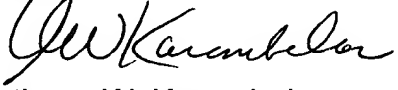
Applicants gratefully acknowledge the allowance of claims 32 and 33 and that claims 23-24 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants respectfully contend that in view of the obvious deficiencies recited above with regard to Yee et al and the inapplicability of both Palermo and Noerpel et al claims 23-24 have been shown to be patentable thereover.

Applicants respectfully submit that in view of the above remarks all of the claims presently under prosecution have been shown to contain patentable subject matter and to be patentably distinguishable over any combination of

Yee et al, Palermo or Noerpel et al. Applicants respectfully request that this application be reviewed and reconsidered in view of the above remarks and that a Notice of Allowance be issued at an early date.

Respectfully submitted,



Anthony W. Karambelas
Registration No. 25,657

Karambelas & Associates
655 Deep Valley Drive, Suite 303
Rolling Hills Estates, CA 90274
Telephone: (310) 265-9565
Facsimile: (310) 265-9545